

THE SAN RAFAEL GROUP IN SOUTHERN UTAH FROM CARMEL TO CEDAR MOUNTAIN

**EXPLANATION**

Sandstone, bedding west of cross-sections; size of symbol indicates relative size of cross-sections.

Sandstone, tabular coarse of cross-strata.

Sandstone, fine bedded.

Sandstone, conglomeratic.

Siltstone.

Mudstone, claystone, shale.

Limestone.

Limestone, oolitic.

Lime-pebble conglomerate.

Gypsum and anhydrite.

Chert.

Caliche.

Cyanite.

Clayey.

Sandy.

Covered.

Poorly exposed.

Unconformity.

Claustrite.

Ripple marks.

Marine invertebrate fossils.

Number beside column indicates unit in measured section.

The graphic sections presented here were all compiled prior to 1950 and are based on fieldwork from 1950 to 1958 and upon other cited work. Stratigraphic columns referred to by name and number refer to the written measured sections soon to be released as U.S. Geological Survey Open-File Reports. Other publications resulting from this work are listed in the references.

The report has been prepared because of other commitments of the authors and the untimely death of D. C. Wright. The sections are released at this time because of the renewed interest in the economic potential of Jurassic rocks. No attempt was made to update the cross sections and some names used are preliminary field terminology. The general nomenclature and correlation of Jurassic rocks has been subjected recently to considerable revision. The interested reader is referred to reports by Peterson and Peterson (in press), Peterson, and O'Sullivan (in press), and O'Sullivan (1959).

**References**

Baker, A. A., 1956, Geology of the Green River Basin-Colorado-Casper region, Fremont, name, and Garfield Counties, Utah. U.S. Geological Survey Bulletin 861, 122 p. [1947].

Bretz, W. A., 1955, Jurassic and pre-Miocene Cretaceous stratigraphy of the western White Mountains, Utah-Corral, in International Association of Petroleum Geologists Guidebook 4th Annual Field Conference, northern Colorado, p. 21-26.

Craty, L. C., and Dickey, D. D., 1956, Jurassic strata of southeastern Utah and southwestern Colorado. In Geologic economic aspects of east-central Utah. International Association of Petroleum Geologists Guidebook, 7th Annual Field Conference, 1956, p. 50-70, 3 figs.

Craty, L. C., and others, 1958, (Erie Creek Section), in Craty, L. C., Measured sections of the Morrison Formation and adjacent formations. U.S. Geological Survey Open-File Report 10103 p. 1-10.

Dick, C. L., 1939, The sections of the western Jurassic of Utah. Journal of Geology, v. 47, p. 436-466.

Dunn, C. W., 1959, Geology of the Salt Valley anticline and adjacent areas, Grand County, Utah. U.S. Geological Survey Bulletin 882, 104 p.

Dickey, C. L., and Wright, D. C., 1959, Preliminary reports to the U.S. Geological Survey on the San Rafael (Estrada) strata. In Geologic investigations of radioactive deposits—semiannual progress report, June 1 to November 30, 1958. U.S. Geological Survey Professional Paper 1004-C, 10 p.

O'Sullivan, J. W., and others, 1958, Sedimentary rocks of the San Rafael (Estrada) and some adjacent areas in southern Utah. U.S. Geological Survey Professional Paper 1004-C, 10 p.

Hart, C. E., Averitt, Paul, and Miller, R. L., 1953, Geology and geography of the Henry Mountains region, Utah. U.S. Geological Survey Professional Paper 220, 238 p.

Wiley, R. W., 1952, Characteristics of the Jurassic Red Creek Formation in Idaho, Wyoming, and Utah. In International Association of Petroleum Geologists Guidebook 4th Annual Field Conference, northern Utah and southwestern Idaho, p. 56-62.

Hines, G. W., 1953, Geology of the Utah-Fremont-Creek area, Duchesne and Siskiyou Counties, Utah. U.S. Geological Survey Bulletin 1027, 88 p.

O'Sullivan, R. B., 1958, Stratigraphic sections of middle Jurassic San Rafael Group from Lizard Point, Arizona, to Bluff, Utah. U.S. Geological Survey 011 and Geographical Chart 0277.

Peterson, Fred, and Peterson, C. A., 1958, Stratigraphic relation of the Navajo Sandstone to Middle Jurassic Formations, southern Utah and northern Arizona. U.S. Geological Survey Professional Paper 1035-A (in press).

Peterson, C. A., and O'Sullivan, R. B., 1958, Preliminary correlation in Triassic and Jurassic rocks, western Interior United States—a preliminary survey. U.S. Geological Survey Professional Paper 1035-A (in press).

Shultz, R. G., and Wright, D. C., 1953, Bedrock maps of several sections in the Carmel Formation, southern Utah, by State papers in geology, hydrology, and topography. U.S. Geological Survey Professional Paper 890-A, p. 10-27.

Smith, L. L., 1952, The Geology of the Anthony Canyon area, Garfield and Piute Counties, Utah. Utah University M.C. Thesis.

Thoburn, R. D., and Krapp, P. L., 1960, Late Paleozoic and early Mesozoic stratigraphy of Lizard Point, Utah. American Association of Petroleum Geologists Bulletin, v. 44, no. 6, p. 1098-1101.

Wright, D. C., and Stearns, D. E., 1952, Preliminary reports to the U.S. Geological Survey on the San Rafael (Estrada) strata. In Geologic investigations of radioactive deposits—semiannual progress report, December 1, 1950 to May 31, 1951. U.S. Geological Survey 101-06, p. 231-264.

1956a, Preliminary report to the U.S. Geological Survey on the San Rafael (Estrada) strata. In Geologic investigations of radioactive deposits—semiannual progress report, December 1, 1951 to May 31, 1952. U.S. Geological Survey 101-06, p. 139-160.

1956b, Pre-Miocene Jurassic strata of southeastern Utah. In Geology of the Four Corners. International Association of Petroleum Geologists Guidebook, 6th Annual Field Conference, 1956, p. 172-187, 7 figs.

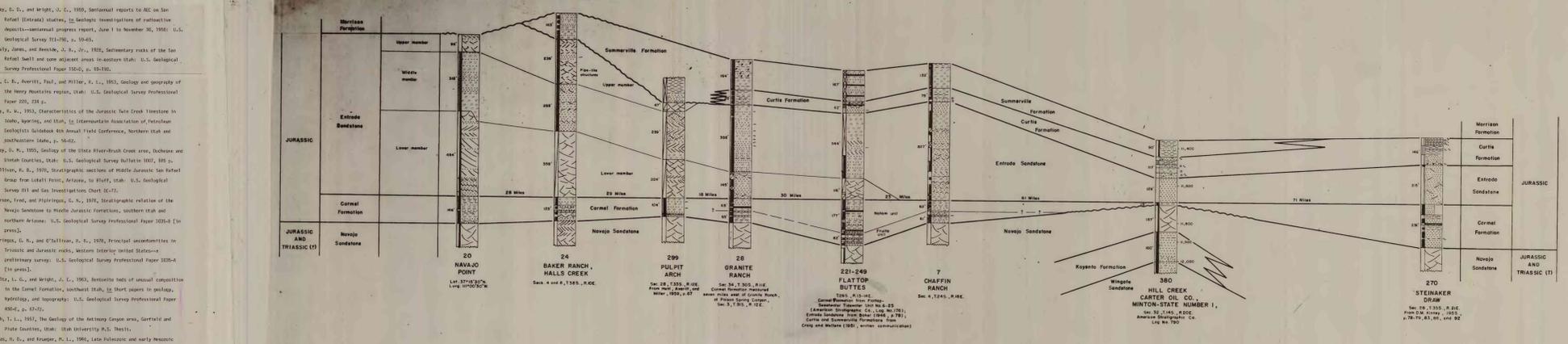
1956c, Upper Jurassic strata of the Colorado Plateau as a record of tectonic history in the western Great Basin (Lab.). Geological Society of America Bulletin, v. 69, no. 12, p. 2, p. 1652.

1959, Preliminary report to the U.S. Geological Survey on the San Rafael (Estrada) strata. In Geologic investigations of radioactive deposits—semiannual progress report for December 1, 1958 to May 31, 1959. U.S. Geological Survey 101-21, p. 61-66.

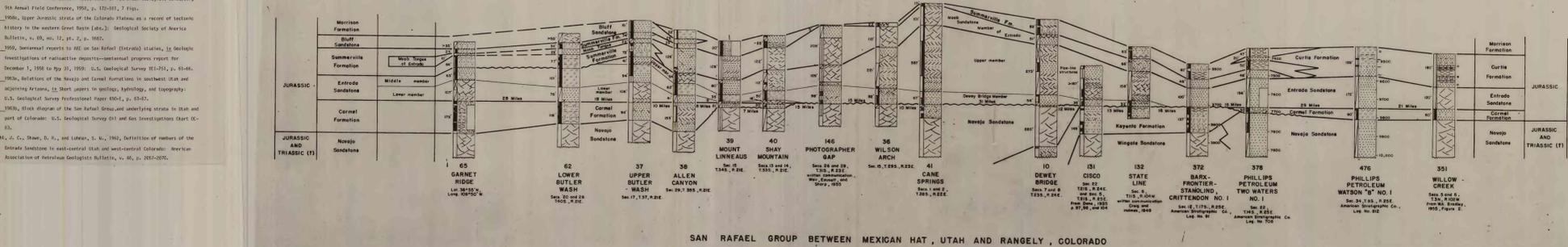
1960, Relations of the Navajo and Carmel Formations in southeastern Utah and adjoining Arizona. In Short papers in geology, hydrology, and topography. U.S. Geological Survey Professional Paper 1004-C, p. 63-67.

1962, Block diagram of the San Rafael Group and underlying strata in Utah and part of Colorado. U.S. Geological Survey 011 and Geographical Chart 0277.

Wright, D. C., Shaw, D. R., and Lohman, S. W., 1962, Definition of members of the Estrada Sandstone in east-central Utah and west-central Colorado. American Association of Petroleum Geologists Bulletin, v. 46, p. 2057-2070.



SAN RAFAEL GROUP BETWEEN THE GLEN CANYON, UTAH AND VERNAL, UTAH



SAN RAFAEL GROUP BETWEEN MEXICAN HAT, UTAH AND RANGELY, COLORADO

NORTH-SOUTH CROSS SECTIONS OF THE JURASSIC SAN RAFAEL GROUP IN UTAH AND WESTERN COLORADO

By J. C. Wright and D. D. Dickey 1978